

AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

1. (Currently Amended) A game system including a game machine and an input device, under which a player plays a game having a rally state using said input device, wherein during the rally state,

said input device comprises an acceleration sensor for generating an acceleration correlation signal when said player actually swings said input device in a real space, and a transmission unit for transmitting said generated acceleration correlation signal to said game machine; and

said game machine displays a ball on a monitor screen through execution of a game program in which a CPU player controlled by a computer program plays against said player, and further comprises:

a first calculation unit for calculating a predicted return position of said ball returned by said CPU player;

a judgment unit for judging whether a current position of said player is in a ball strikable range by comparing said predicted return position and the current position of said player;

a ball striking position movement unit for automatically moving a ball striking position of said player to be approximated to said predicted return position in which said judgment unit judges that the current position is out of the ball strikable range, wherein the ball striking position of said player remains at the current position if the current position is within the ball strikable range, and is always moved to be approximated to

said predicted return position when the current position is out of the ball strikable range without inactivating said player to allow said player to continue participating the game;

a swing detection unit for detecting whether said input device has been actually swung or not; and

a second calculation unit for calculating an initial speed vector of said ball after received when said swing detection unit has detected a swing in which the position of said ball exists in a ball receivable range that is three-dimensionally defined, from a position of said ball and acceleration of said input device according to said acceleration correlation signal, wherein the initial speed vector is calculated based on coordinates of said ball on the screen and a magnitude of a swing of said input device.

2-5. (Canceled).

6. (Currently Amended) A game system including a game machine and two or more input devices, under which two or more players play a game having a rally state using said input devices, wherein during the rally state,

said input devices each comprise an acceleration sensor for generating an acceleration correlation signal when said player actually swings said input device in a real space, and a transmission unit for transmitting said generated acceleration correlation signal to said game machine;

said game machine runs a game program in which said two or more players play the game and displays said ball on a monitor screen, and further comprises:

a first calculation unit for calculating a predicted return position of a ball returned by an opposite player;

a judgment unit for judging whether a ball striking player is in a ball strikable range by comparing said predicted return position and a current position of said ball striking player;

a ball striking position movement unit for automatically moving a ball striking position for said ball striking player to be approximated to said predicted return position when said judgment unit judges that the current position is out of the ball strikable range, wherein the ball striking position of said ball striking player remains at the current position if the current position is within the ball strikable range, and is always moved to be approximated to said predicted return position when the current position is out of the ball strikable range without inactivating said ball striking player to allow said two or more players to continue participating the game;

a swing detection unit for detecting whether said input device has been actually swung or not; and

a second calculation unit for calculating an initial speed vector of said ball after received when said swing detection unit has detected a swing in which the position of said ball exists in a ball receivable range that is three-dimensionally defined, from a position of said ball and acceleration of said input device according to said acceleration correlation signal.

7. (Previously Presented) A game system according to claim 1 or 6, wherein said input device further includes an operating switch;
said transmission unit transmits an operation signal from said operating switch together with said acceleration correlation signal to said game machine; and

said game machine further comprises a position movement unit for moving said ball striking position on said monitor screen from forward position to backward position or from backward position to forward position, in response to said operation signal transmitted from said input device.

8. (Previously Presented) A game system according to claim 1 or 6, wherein said transmission unit of said input device includes an infrared light-emitting element for transmitting said acceleration correlation signal by means of infrared light.

9. (Previously Presented) A game system according to claim 8, wherein said transmission unit digital-modulates and transmits said acceleration correlation signal to said game machine; and

said game machine digital-demodulates said acceleration correlation signal transmitted by said transmission unit.

10. (Currently Amended) A method for controlling a game having a rally state displayed on a game machine and played by a player using an input device, the gaming machine comprising a processor and the input device, during the rally state, the method comprising:

generating an acceleration correlation signal when said player actually swings said input device in a real space;

transmitting said generated acceleration correlation signal to said game machine;

displaying, by the game machine, a ball on a monitor screen through execution via the processor of a game program in which a CPU player controlled by a computer program plays against said player:

calculating, via the processor, a predicted return position of said ball returned by said CPU player;

judging, via the processor, whether a current position of said player is in a ball strikable range by ~~emparing~~ comparing said predicted return position and the current position of said player;

automatically moving, via the processor, a ball striking position of said player to be approximated to said predicted return position in which said judgment unit judges that the current position is out of the ball strikable range, wherein the ball striking position of said player remains at the current position if the current position is within the ball strikable range, and is always moved to be approximated to said predicted return position when the current position is out of the ball strikable range without inactivating said player to allow said player to continue participating the game;

detecting, via the processor, whether said input device has been actually swung or not; and

calculating, via the processor, an initial speed vector of said ball after received when a swing is detected in which the position of said ball exists in a ball receivable range that is three-dimensionally defined, from a position of said ball and acceleration of said input device according to said acceleration correlation signal, wherein the initial speed vector is calculated based on coordinates of said ball on the screen and a magnitude of a swing of said input device.

11. (Currently Amended) The ~~[[A]]~~ method according to claim 10, wherein said input device includes an operating switch and a transmitting unit, the transmitting unit transmits an operation signal from said operating switch together with said acceleration correlation signal to said game machine, and

wherein the method further comprises moving, via the processor, said ball striking position on said monitor screen from forward position to backward position or from backward position to forward position, in response to said operation signal transmitted from said input device.

12. (Currently Amended) The ~~[[A]]~~ method according to claim 10, wherein said input device includes transmitting unit having an infrared light-emitting element for transmitting said acceleration correlation signal by means of infrared light.

13. (Currently Amended) The ~~[[A]]~~ method according to claim 12, wherein said transmission unit digital-modulates and transmits said acceleration correlation signal to said game machine; and

said game machine digital-demodulates said acceleration correlation signal transmitted by said transmission unit.

14. (Currently Amended) A method for controlling a game having a rally state displayed on a game machine ~~and~~ ~~[[is]]~~ played by two or more players using two or more input devices, the game machine comprising a processor and the two or more input devices, during the rally state, the method comprising:

generating acceleration correlation signals when the two or more players actually swing said two or more input devices in a real space;[[,]]

transmitting said generated acceleration correlation signals to said game machine, wherein said game machine runs a game program in which said two or more players play the game and displays a ball on a monitor screen;

calculating, via the processor, a predicted return position of a ball returned by an opposite player;

judging, via the processor, whether a ball striking player is in a ball strikable range by comparing said predicted return position and a current position of said ball striking player;

automatically moving, via the processor, a ball striking position for said ball striking player to be approximated to said predicted return position when said judgment unit judges that the current position is out of the ball strikable range, wherein the ball striking position of said ball striking player remains at the current position if the current position is within the ball strikable range, and is always moved to be approximated to said predicted return position when the current position is out of the ball strikable range without inactivating said ball striking player to allow said two or more players to continue participating the game;

detecting, via the processor, whether said two or more input devices have been actually swung or not; and

calculating, via the processor, an initial speed vector of said ball after received when a swing is detected in which the position of said ball exists in a ball receivable

range that is three-dimensionally defined, from a position of said ball and acceleration of said input device according to said acceleration correlation signal.

15. (Currently Amended) The [[A]] method according to claim 14, wherein each of said input devices includes an operating switch and a transmission unit; said transmitting unit transmits an operation signal from said operating switch together with said acceleration correlation signal to said game machine, and

wherein the method further comprises a position movement unit for moving said ball striking position on said monitor screen from forward position to backward position or from backward position to forward position, in response to said operation signal transmitted from said input device.

16. (Currently Amended) The [[A]] method according to claim 14, wherein each of said input devices includes a transmission unit having an infrared light-emitting element for transmitting said acceleration correlation signal by means of infrared light.

17. (Currently Amended) The [[A]] method according to claim 16, wherein said transmission unit digital-modulates and transmits said acceleration correlation signal to said game machine; and

said game machine digital-demodulates, via the processor, said acceleration correlation signal transmitted by said transmission unit.

18. (New) A computer program product comprising a computer-readable medium having control logic stored therein for causing a computer to execute a method

for controlling a game having a rally state displayed on a game machine and played by a player using an input device, during the rally, the control logic comprising:

first computer readable program code means for generating an acceleration correlation signal when said player actually swings said input device in a real space;

second computer readable program code means for transmitting said generated acceleration correlation signal to said game machine;

third computer readable program code means for displaying, by the game machine, a ball on a monitor screen through execution via a game program in which a CPU player controlled by a computer program plays against said player:

fourth computer readable program code means for calculating a predicted return position of said ball returned by said CPU player;

fifth computer readable program code means for judging whether a current position of said player is in a ball strikable range by comparing said predicted return position and the current position of said player;

sixth computer readable program code means for automatically moving a ball striking position of said player to be approximated to said predicted return position in which said judgment unit judges that the current position is out of the ball strikable range, wherein the ball striking position of said player remains at the current position if the current position is within the ball strikable range, and is always moved to be approximated to said predicted return position when the current position is out of the ball strikable range without inactivating said player to allow said player to continue participating the game;

seventh computer readable program code means for detecting whether said input device has been actually swung or not; and

eighth computer readable program code means for calculating an initial speed vector of said ball after received when a swing is detected in which the position of said ball exists in a ball receivable range that is three-dimensionally defined, from a position of said ball and acceleration of said input device according to said acceleration correlation signal, wherein the initial speed vector is calculated based on coordinates of said ball on the screen and a magnitude of a swing of said input device.

19. (New) A computer program product comprising a computer-readable medium having control logic stored therein for causing a computer to execute a method for controlling a game having a rally state displayed on a game machine and played by two or more players using two or more input devices, during the rally state, the control logic comprising:

first computer readable program code means for generating acceleration correlation signals when the two or more players actually swing said two or more input devices in a real space;

second computer readable program code means for transmitting said generated acceleration correlation signals to said game machine, wherein said game machine runs a game program in which said two or more players play the game and displays a ball on a monitor screen;

third computer readable program code means for calculating a predicted return position of a ball returned by an opposite player;

fourth computer readable program code means for judging whether a ball striking player is in a ball strikable range by comparing said predicted return position and a current position of said ball striking player;

fifth computer readable program code means for automatically moving a ball striking position for said ball striking player to be approximated to said predicted return position when said judgment unit judges that the current position is out of the ball strikable range, wherein the ball striking position of said ball striking player remains at the current position if the current position is within the ball strikable range, and is always moved to be approximated to said predicted return position when the current position is out of the ball strikable range without inactivating said ball striking player to allow said two or more players to continue participating the game;

sixth computer readable program code means for detecting whether said two or more input devices have been actually swung or not; and

seventh computer readable program code means for calculating an initial speed vector of said ball after received when a swing is detected in which the position of said ball exists in a ball receivable range that is three-dimensionally defined, from a position of said ball and acceleration of said input device according to said acceleration correlation signal.